

Abstract of the Disclosure

The invention relates to a method for processing aluminum in a furnace consisting in introducing an aluminum-containing material and possibly one or several types of salt into the furnace, melting said material by heating with the aid of at least one burner supplied with a combustive material and fuel in such a way that a molten aluminum possibly covered with a slag containing, in particular alumina and at least one salt is produced and in measuring a carbon monoxide and/or hydrogen concentration in the furnace atmosphere or in a smoke at the exit of the furnace. Oxygen content in the combustive material supplying at least one burner is greater than 10 % by volume, preferably greater than 21 % by volume. The inventive method also involves a final phase of reduction of the molten aluminum oxydation during which the fuel flow rate is substantially constant while the injected combustive flow rate is controlled at a value ranging from 3 to 15 % by volume which is greater than a CO concentration in the furnace and/or in the smoke without control.